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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/281,164	03/30/1999	KATSUHIKO NAGATA	1232-4527	6886

7590 12/18/2002

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EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
2615	

DATE MAILED: 12/18/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/281,164	NAGATA ET AL.	
	Examiner	Art Unit	
	Nhan T. Tran	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 March 1999 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Drawings

Figures 5 – 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-9, 11-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Mabuchi et al. (US 5,485,208).

Regarding claim 1, Mabuchi et al. disclose an optical device (lens assembly) comprising:
a connector for electrical connection with a camera as shown in fig. 9;
a process circuit (U1 – U4 located in the lens assembly) as shown in fig. 7;

an interface circuit (lens-side microcomputer) to be connected between the process circuit and the connector as shown in fig. 6 & 7;

wherein the interface circuit is so constructed that the circuit characteristics, interface or signal handling standard (e.g., AF, AE, AZ...) is switchable for matching the process with different cameras (e.g., camera assembly A, camera assembly B are being matched with lens assembly C) (see fig. 1(b); col. 2, lines 27-36 & col. 8, lines 1-10).

Regarding claim 2, Mabuchi et al. shows that the lens assembly C is capable of being matched with both the camera assembly A and B. This clearly represents designation means for designating arbitrary one among plural different cameras; and wherein the interface circuit is adapted to switch at least one of the circuit characteristics, interface, or signal handling standard (e.g., AF, AE, AZ...) according to the designated camera based on the word length transmitted from the camera (see fig. 1(b) & 4, col. 10, lines 11-23; col. 16, lines 50-56 & col. 17, lines 11-16).

Regarding claim 3, the interface circuit is clearly adapted to set the output characteristics for signal output from the lens assembly to the camera assembly at characteristics matching the designated camera (i.e., the lens output characteristic for AF to match with the characteristics of AF of the camera) as described in fig. 3 & 4, col. 12, lines 38-51.

Regarding claim 4, Mabuchi et al. disclose that the interface circuit is adapted to convert a signal transmitted from the camera assembly into a signal matching the signal handling standard in the lens assembly (see col. 17, lines 46-50).

Regarding claim 5, the interface circuit is definitely also adapted to convert a signal to be transmitted from the lens assembly to the camera assembly into a signal matching the signal handling standard in the camera since it is a bi-directional communication between the lens assembly and camera assembly to assure compatibility with respect to the invention as disclosed by Mabuchi et al. (see fig. 1(b) col. 17, lines 46-50).

Regarding claim 6, Mabuchi et al. discloses a lens device connectable to different cameras and adapted to execute signal communication between the camera and the lens as shown in fig. 1(b) - 7, the device comprising a conversion circuit for converting a signal, which is transmitted from the camera, into a signal to match the signal handling standard in the lens in accordance with the camera (see fig. 3 & 4; col. 17, lines 46-50).

Regarding claim 7, Mabuchi et al. also show that the lens assembly C is capable of being matched with both the camera assembly A and B (fig. 1(b)). This clearly represents conversion process designation means for varying the conversion process in the conversion circuit respectively for the different cameras (see fig. 1(b) & 4, col. 10, lines 11-23; col. 16, lines 50-56 & col. 17, lines 11-16).

Regarding claim 8, the conversion circuit is adapted to execute a predetermined first conversion process (e.g., the process of AF, AE, AZ) for a first camera (camera assembly A), on the signal from the camera, and predetermined second conversion process (e.g., the process of AE), for a second camera (camera assembly B), on the signal from the camera (see fig. 1(b); col. 14, lines 59-65; col. 16, lines 50-58; col. 17, lines 14-24).

Regarding claim 9, the designation means for designating the conversion process to the conversion circuit, according to the camera assembly A or B, is analyzed in claim 2 and is further described in col. 12, lines 20-26.

Regarding claim 11, Mabuchi et al. disclose that the lens assembly includes AF, AE, AZ functions which are inherently stored in a memory such as a ROM for converting into corresponding functions by performing data conversion based on the change of word length accordance with the request from the camera side as shown in fig. 5(a) & 5(b), step S3-S10 and col. 17, lines 46-50. These functions and data conversion operation encompass the limitation of "said conversion circuit includes a memory circuit for storing conversion data for data conversion, and is adapted to effect data conversion on a signal from the camera, corresponding the camera designated by the designation means."

Regarding claim 12, the claimed limitations are accommodated with respect to claim 6 in a vice versa operation as shown in fig. 1(b).

Regarding claim 13, the claimed limitations are accommodated with respect to claim 7.

Regarding claim 14, the claimed limitations are accommodated with respect to claim 8.

In addition, the reference signal is presented by the word length of 14 or 6 based on the communication with the camera assembly so that the lens assembly responds back to match with the camera assembly functions as described in col. 16, lines 50-58 & col. 17, lines 14-24.

Regarding claim 15, the claimed limitations are accommodated with respect to claim 9.

Regarding claim 16, the claimed limitations are accommodated with respect to claim 11.

Regarding claim 17, the claimed limitations are accommodated with respect to claims 1-9 & 11-16, in which the switching circuit and output characteristics are described through switching the functions and characteristics of the lens device to match with the camera's functions and characteristics as shown in fig. 1(b) & 4.

Regarding claim 18, the claimed limitations are accommodated with respect to claims 1-5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mabuchi et al. (US 5,485,208) in view of Kawasaki et al. (US 5,068,680).

Mabuchi et al. do not explicitly disclose that the designation means includes a setting operation member for setting data by a manual operation. However, Kawasaki et al. teach interchangeable lens having a setting operation member by switching the electrical contact 79a, 79b and 81 to control data transmitted between the lens and camera for selecting automatic or manual exposure mode.

It would enhance the lens device by enabling the operation member as taught by Kawasaki et al. to control data transmitted between the lens and camera for selecting automatic or manual exposure mode.

Therefore, it would have been obvious to one of ordinary skill in the art to enable the interchangeable lens device of Mabuchi et al. with the operation member as taught by Kawasaki et al. to control data transmitted between the lens and camera for selecting automatic or manual exposure mode.

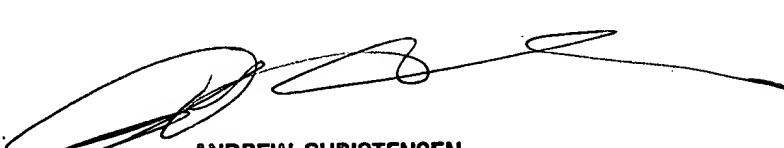
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (703) 605-4246. The examiner can normally be reached on Monday - Friday, 8:00am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew B Christensen can be reached on (703) 308-9644. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

NT.
December 9, 2002



ANDREW CHRISTENSEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

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